Causes for Gasoline & Diesel Price Increases in California

JULY MONTHLY UPDATE

California Energy Commission

July 1, 2003

Summary

On March 13, 2003, Governor Davis asked the California Energy Commission (Energy Commission) to investigate the causes for the rapid rise in gasoline and diesel fuel prices in February and March. This report presents the Energy Commission's July 2003 update.

In early June, a new round of minor refinery problems in California combined to cause a significant reduction in gasoline and diesel production. The total loss of gasoline production alone was over three million barrels, or about 10 percent of total gasoline supply for the month of June. As a result, retail gasoline prices reversed a twelve-week decline in June, climbing from $1.73 to $1.80 per gallon. Retail diesel prices also rose in June from a low of 1.52 to $1.64 per gallon.

As of July 1, all but one of California's refineries have returned to full operation. Repairs at the last refinery should be completed over the next few days. However, West Coast inventories are unlikely to rise as rapidly as they did following the March 17 price spike. Increased imports of gasoline and blendstocks will be necessary to raise West Coast inventories to more typical seasonal levels.

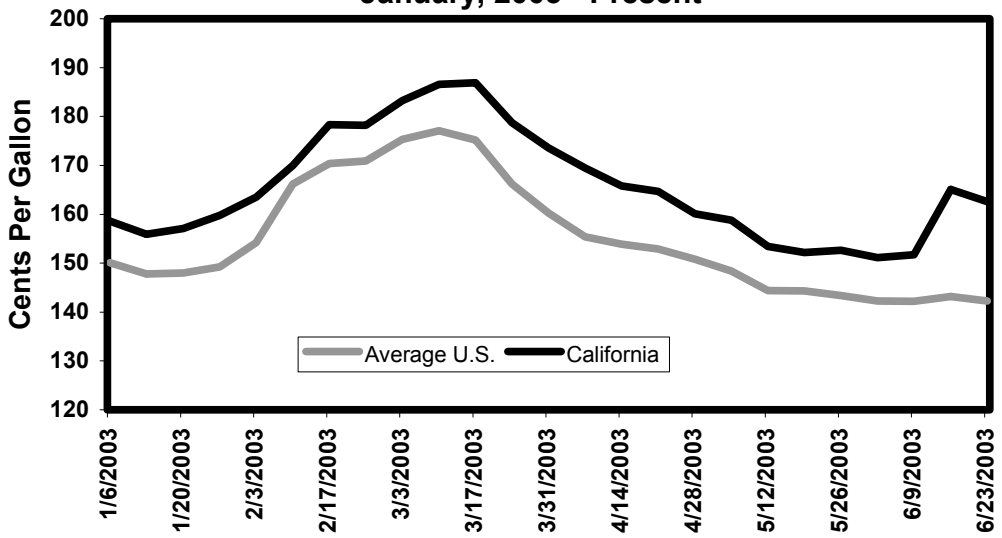
Current Price Assessment[1]

This July update incorporates wholesale price data through June 20, 2003 and retail price data through June 23.

Recent California Diesel Fuel Prices

Figure 1 compares retail diesel prices in California with the U.S. average price through June 23, 2003.

Figure 1
Retail Diesel Prices - California vs. U.S.
January, 2003 - Present



During the March 2003 price spike, unscheduled refinery outages impacted gasoline production almost exclusively. Refinery problems that occurred in June 2003, however, impacted a significant volume of diesel production in addition to gasoline production. As a result, retail diesel prices rose sharply between June 9 and June 16 from $1.52 to $1.64 per gallon. The industry adjusted quickly, however, through increased production of diesel and increased imports of other distillates. California diesel prices have been declining steadily since the June 16 peak.

Recent California Gasoline Prices

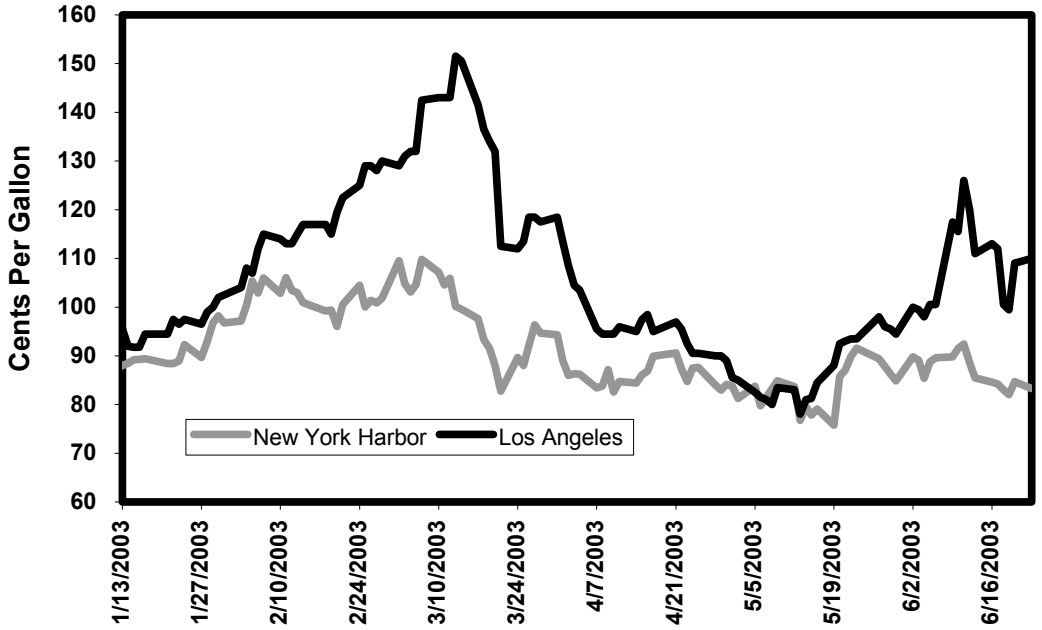
Figure 2 compares Los Angeles wholesale gasoline prices with New York prices through June 23, 2003.

[1] Note: All gasoline and diesel price data are provided by EIA.

Following the series of refinery outages and maintenance difficulties that contributed to the March 2003 price spike, all of California's gasoline producing refineries were fully operational by mid-April 2003. On May 8, ten weeks after the $1.52 peak, the average Los Angeles wholesale gasoline price had fallen to a low of 80 cents per gallon.

Over the past seven weeks, however, a new round of unscheduled refinery outages has again put significant upward pressure on wholesale gasoline prices in California. While none of these outages are particularly serious individually, it is unusual to have this many refinery problems occur simultaneously. During one five day period between June 9 and June 13, the concurrent impact of four separate refinery problems at three refineries reduced in-state production of gasoline by 14 percent. Since June 13, all refineries have returned to full production with the exception of Shell Martinez, which should be fully operational within the next few days.

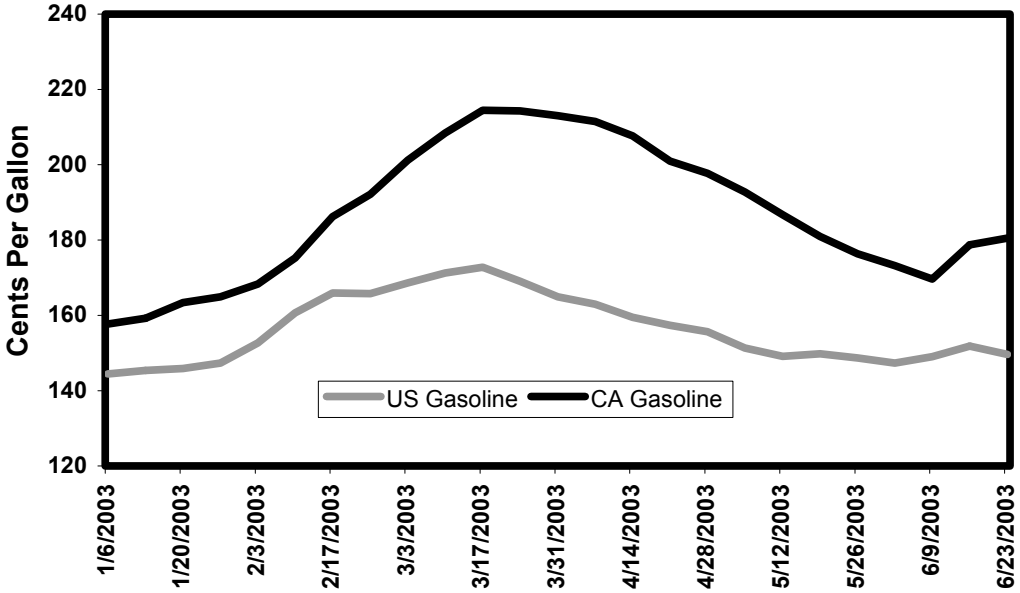
Figure 2
Wholesale Gasoline Prices - Los Angeles vs. New York
January, 2003 - Present



Although wholesale gasoline prices have fallen since June 13, they still are high relative to wholesale prices in New York due in large part to extremely low gasoline inventories at the start of the summer driving season.

Figure 3 compares retail regular gasoline prices in California with the U.S. averages through June 23, 2003. Since the March 17 peak of $2.15 per gallon, the average California gasoline price has declined steadily to a twelve-week low of $1.73 on June 9. As with diesel fuel, recent refinery outages also significantly reduced gasoline production and raised retail gasoline prices. As of June 23, 2003, the average price of California gasoline was $1.80 per gallon.

Figure 3
Retail Gasoline Prices - California vs. U.S. All Formulations
January, 2003 - Present



Contributing Local, National, and Worldwide Market Issues

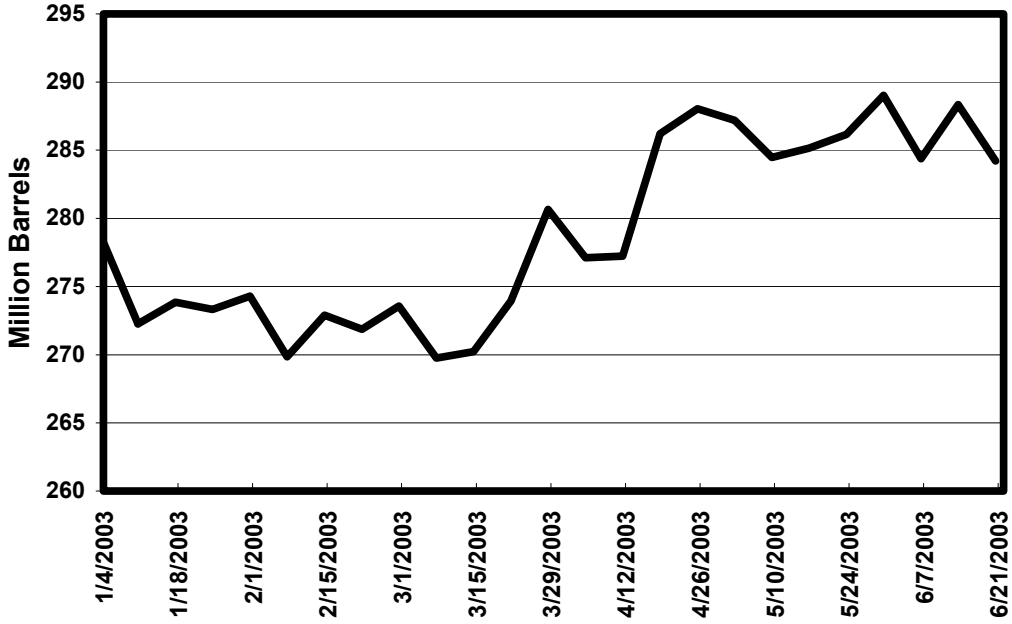
Crude Oil Inventories

U.S. crude oil inventories from January 3 through June 20, 2003 (see Figure 4) have not changed significantly since the last Governor's report, and continue to fluctuate around 287 million barrels. This is about 10% below the level of crude inventories in the U.S. one year ago.

Crude Oil Prices

As crude oil inventories are slow to recover from a 27 year low in March of 2003, crude oil prices also remain persistently high. Alaska North Slope (ANS) crude oil prices continued to rise last month to a June 9 high of $30 per barrel, and have fallen only slightly since. As of June 23, ANS crude cost $29 per barrel.

Figure 4
US Crude Oil Inventories
January 4, 2003 through June 13, 2003



Gasoline Inventories

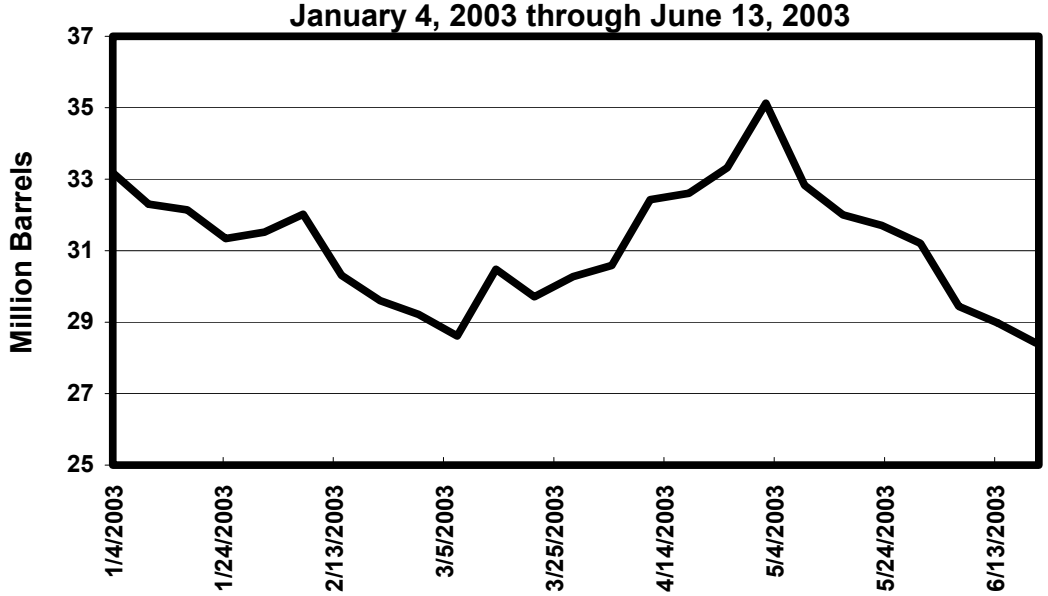
Figure 5 displays total finished gasoline inventories for PADD 5.[2] It appears that a large portion of the gasoline production lost to the current round of refinery

outages has been compensated for through reduced gasoline inventories. This is in addition to normal, seasonal declines in inventories observed during the summer driving season when demand exceeds in-state supply. Since an early May peak of 35 million barrels, West Coast inventories have fallen to 28.5 million barrels as of June 20. This level of inventories is similar to the level that existed in early March 2003, just before the March 17 price spike.

Even as all California refineries return to full operation, West Coast inventories are unlikely to rise as rapidly as they did following the March 17 price spike. Increased imports of gasoline and blendstocks will be necessary to raise West Coast inventories to more typical seasonal levels. It remains to be seen whether price incentives in the marketplace will be sufficient to attract these additional imports.

[2] Note: EIA publishes weekly gasoline inventories only by Petroleum Area Defense District (PADD), not by state. Since California comprises over 70 percent of PADD 5, the changes in the level of this data series (Figure 6) are good proxy for California.

Figure 5
EIA PADD 5 Finished Gasoline Inventories
January 4, 2003 through June 13, 2003



California Fuel Costs and Apparent Margins

It is important to make a clear distinction between the cost of producing a gallon of gasoline and the ultimate price in the marketplace for that same gallon. When markets are competitive, it is only on average that prices will equal the actual production and distribution costs plus a normal profit margin for refiners, distributors, and retailers.

California Retail Gasoline and Diesel Cost Analysis

In Tables 1 and 2 the cost components of a typical gallon of gasoline or diesel fuel are broken down for June 2002, June 2003 and all years since 1997.[3] After netting out all taxes and crude oil costs, the bottom two rows of both tables display the implied refining and distribution margins.[4] "Refiner Costs and Profits" are the returns to refiners inclusive of all production costs other than the cost of

[3] The following data sources were used in preparing the tables 1 and 2; diesel and gasoline branded and unbranded rack prices are provided by OPIS, all retail prices are provided by EIA, and ANS crude oil prices are provided by the Wall Street Journal.

[4] Most branded retail gasoline stations are operated by franchise dealers who must purchase their gasoline from a major branded refiner at the Dealer Tankwagon (DTW) price. DTW prices are determined by the branded refiners and include all delivery costs. Because the "Distribution and Marketing Costs" in the table below are derived from terminal rack prices and not DTW prices, an actual dealer margin, inclusive of costs and profits, cannot be inferred. Since the Energy Commission does not collect DTW prices, we cannot confirm the extent to which DTW prices differ from OPIS branded rack prices.

crude oil.[5] "Distribution Costs, Marketing Costs, and Profits" are the returns to petroleum marketers and distributors who transport petroleum product from distribution terminal to retail stations and also include all transportation costs.[6]

Table 1
California Gasoline Cost Analysis

	Branded Gasoline			Unbranded Gasoline		
	June 2003	**June 2002**	**1997 - Present**	**June 2003**	**June 2002**	**1997 - Present**
Retail Prices	1.76	1.59	1.48	1.76	1.59	1.48
Federal Excise Tax	0.18	0.18	0.18	0.18	0.18	0.18
State Excise Tax	0.18	0.18	0.18	0.18	0.18	0.18
State and Local Sales Tax	0.13	0.12	0.11	0.13	0.12	0.11
Crude Oil Cost	0.71	0.58	0.51	0.71	0.58	0.51
Refiner Costs and Profits	**0.45**	**0.48**	**0.40**	**0.45**	**0.39**	**0.35**
Distribution Costs, Marketing Costs, and Profits	**0.11**	**0.05**	**0.10**	**0.11**	**0.14**	**0.15**

Table 2
California Diesel Cost Analysis

	Branded Diesel			Unbranded Diesel		
	June 2003	**June 2002**	**1997 - Present**	**June 2003**	**June 2002**	**1997 - Present**
Retail Prices	1.51	1.43	1.45	1.51	1.43	1.45
Federal Excise Tax	0.24	0.24	0.24	0.24	0.24	0.24
State Excise Tax	0.18	0.18	0.18	0.18	0.18	0.18
State and Local Sales Tax	0.09	0.09	0.09	0.09	0.09	0.09
Crude Oil Cost	0.71	0.58	0.51	0.71	0.58	0.51
Refinery Costs and Profits	**0.23**	**0.20**	**0.27**	**0.22**	**0.19**	**0.26**
Distribution Costs, Marketing Costs, and Profits	**0.06**	**0.14**	**0.17**	**0.07**	**0.15**	**0.17**

5 "Refiner Costs and Profits" includes all non-crude oil costs associated with refining and terminal operation, crude oil processing, oxygenate additives, product shipment and storage, oil spill fees, depreciation, purchases of gasoline to cover refinery shortages, brand advertising, and profits. The component is calculated as the difference between the Oil Price Information Service (OPIS) average rack price of gasoline and crude oil cost.

6 "Distribution Costs, Marketing Costs, and Profits" includes all costs associated with the distribution of petroleum product from distribution terminals to the ultimate retail consumer. These costs include: franchise fees, and/or rents, wages, utilities, supplies, equipment maintenance, environmental fees, licenses, permitting fees, credit card fees, insurance, depreciation, advertising, and profits.

Petroleum Industry Information - Response to Information Requests

In its March 28 report to the Governor, the Energy Commission identified some inadequacies in current industry data reporting requirements and discussed the need to broaden existing data-collection efforts. This more detailed and frequent level of data collection is necessary to improve the Energy Commission's ability to assess and respond to petroleum issues accurately. The Energy Commission is especially concerned about the potential for supply problems during the 2003 summer driving season with two different and non-fungible formulations of California gasoline in the market place.

A rulemaking proceeding is underway to obtain the required information. The Energy Commission is working with industry to modify this proceeding into an emergency rulemaking. Using this approach, the new reporting requirements would be in place sooner than they would have through a regular rulemaking.

In addition to the rulemaking, the Energy Commission is working with industry to review and revise the standard reports used to submit data to the Energy Commission. To date, the industry has provided valuable comments to the Energy Commission in this area.